

### REMARKS

Claims 1-38 are in this application and are presented for consideration. By this amendment, Applicant has amended claims 1-38.

The drawings have been objected to as failing to comply with 37 CFR 1.84(p)(5) because the Office Action states that the drawings do not include one of the reference signs mentioned in the description.

Applicant has attached a replacement sheet of drawings of Figure 9 to address this issue. Applicant has amended Figure 9 to include the reference character "V". Applicant respectfully requests that the Examiner enter the drawing as now presented.

The abstract has been objected to because of minor informalities.

Applicant has amended the abstract to address this issue. Applicant wishes to thank the Examiner for the careful review of the specification.

Claim 25 has been objected to because of minor informalities.

Claim 25 has been amended to address this issue. Applicant wishes to thank the Examiner for the careful review of the claims.

Claims 14, 26, 28, 29 and 31 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended the claims paying close attention to the Examiner's remarks. Specifically, Applicant has amended the claims to address the lack of antecedent basis issues and to improve the overall form of the claims. It is Applicant's position that the claims as now

presented are clear and fully comply with the requirements of the statute.

Claims 1, 2, 7-9, 14, 15, 17-20, 23, 24, 26, 28-33, 35 and 36 have been rejected under 35 U.S.C. 102(b) as being anticipated by Bean et al. (U.S. 4,268,235).

The present invention relates to a device for dry forming a web of fibers. The device includes a chamber defined in a distribution head. A portion of a screen mesh closes a bottom opening of the chamber. Agitator members are located within the chamber. Each agitator member has a rotating shaft that rotates about a rotational axis of the rotating shaft. Each rotating shaft has shaped profiles. The chamber receives a flow of gas that includes fibers that are suspended in the gas. The agitator members advantageously agitate the fibers in the chamber so that the fibers resting on the mesh are moved and placed into circulation within the chamber. This advantageously provides a more efficient and effective fiber distribution on the forming wire. The prior art as a whole fails to disclose such features and such uniform fiber distribution advantages.

Bean et al. discloses a plurality of elongated banks 24 of brushes that extend in a parallel array transversely of a direction of movement of a screen 18. Brush banks 24 are disposed above the screen 18 such that the tips of the bristles 24a just touch the screen. The banks 24 are mounted for longitudinal movement, in short, non-synchronous oscillating strokes. A portion of delivered fibers fall through moving screen 18 while others are temporarily carried horizontally by the screen until they are engaged by bristles 24a of an oscillating brush bank 24. The moving brush bank 24 imparts a transverse displacement to these fibers in the cross machine direction. Fibers not falling through the screen 18 are moved thereby to the next

successive bank 24. Uniformity of fiber distribution is ensured in the cross machine direction of web W.

Bean et al. fails to teach and fails to suggest the combination of agitator members wherein each agitator member has a rotating shaft that rotates about a rotational axis. Bean et al. merely discloses brush banks 24 that oscillate back and forth at a perpendicular angle to the direction of movement of a screen 18. However, Bean et al. provides no teaching and no suggestion for the brush banks 24 rotating about a rotational axis thereof as claimed. Compared with Bean et al., the agitator members of the present invention rotate about a rotational axis and are not provided with an axial movement. This provides a uniform distributing effect that is quite different from that of the reciprocating brushes of Bean et al. In contrast to the present invention, Bean et al. provides for distribution of the fibers in a cross-machine direction by distributing the fibers, which are already resting on the screen mesh 18 such that they are distributed along the entire width of the forming wire (Column 3, lines 10-15). The present invention takes a different approach by providing rotating shafts and rotating profiles the purpose of which is not to distribute the fibers in the cross-machine direction, but rather to agitate the fibers in the chamber. Since the profiles attached to the agitator members of the present invention rotate about the rotating axis of each agitator, they move the fibers resting on the mesh and place them into circulation within the chamber. This advantageously provides a drastically more efficient fiber distribution on the forming wire. Bean et al. does not teach such uniform fiber distribution advantages since the brushes of Bean simply draw the fibers in the cross-machine direction and push them against the mesh, which disadvantageously

results in the mesh being filled with fibers that obstruct the flow of the fibers towards the forming wire. The present invention does not obstruct the flow of fibers through the screen since the agitator members with the profiles rotate via rotating shafts. This efficiently removes the fibers from the screen if the fibers do not flow through the screen mesh so that the screen is always clean and in optimal condition for fiber flowing towards the forming wire.

Bean et al. teaches that lumps of fibers can form as a consequence of the bristles 24a moving back and forth against the screen. If a small lump or knot of fibers accidentally forms on the screen of Bean et al., it will continue to get bigger and bigger because it will be moved back and forth in the cross-machine direction as an effect of the bristles trapping the lump and moving it transversely. Even if the lump eventually passes through the screen of Bean et al., it will be collected on the forming wire as a knot of fibers, which will disadvantageously result in a non-uniform fiber density on the forming wire. The present invention avoids this problem due to rotational movement of the agitator members, which advantageously keeps all the fibers agitated and in a random circulation in a turbulent air flow in the machine chamber. This advantageously causes possible fiber knots or lumps to disintegrate so that the knots or lumps are not deposited on the screen mesh. This significantly provides a web of fibers that has a highly uniform density. Bean et al. does not teach such uniform fiber density advantages since the brush banks 24 of Bean et al. merely oscillate in an axial direction and do not rotate as featured in the claimed combination. As such, the prior art as a whole takes a different approach and fails to disclose important features of the present invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1 as now presented

and all claims that depend thereon.

Further and favorable consideration on the merits is requested.

Respectfully submitted  
for Applicant,



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Attached: (1) Sheet of Replacement Drawings

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